Applicant claims the right of priority under 35 U.S.C. § 119(a) - (d) based on patent application No. 98830472.1, filed July 31, 1998, in the European Patent Office, and patent application No. 99830225.1, filed April 19, 1999, in the European Patent Office; further, Applicant claims the benefit under 35 U.S.C. § 119(e) based on prior-filed, copending provisional application No. 60/106,104, filed October 29, 1998, in the U.S. Patent and Trademark Office, and prior-filed, copending provisional application No. 60/134,228, filed May 14, 1999, in the U.S. Patent and Trademark Office.--

IN THE CLAIMS:

Please cancel, without prejudice or disclaimer, claims ~~1-30~~, and add new claims ~~31-60~~, as follows:

--31. (new) A method of manufacturing a carcass structure for tyres, in particular for two-wheeled vehicles, comprising the steps of:

preparing strip sections each comprising longitudinal and parallel thread elements at least partly coated with at least one layer of raw elastomer material;

making at least one carcass ply by laying down and circumferentially distributing the strip sections on a toroidal support, each of the strip sections extending in a U-shaped configuration around a cross-section outline of the toroidal support, to define two side portions mutually spaced apart in an axial direction and a crown portion extending at a radially outer position between the side portions; and

applying annular reinforcing structures to areas close to inner circumferential edges of the at least one carcass ply,

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wherein formation of each annular reinforcing structure comprises the steps of:

laying down at least one elongated element in concentric coils to form an annular anchoring insert substantially in a form of a crown;

forming at least one filling body of raw elastomer material; and

joining the at least one filling body to the annular anchoring insert.

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32. (new) The method of claim 31, wherein formation of the at least one carcass ply comprises the steps of:

laying down on the toroidal support a first series of the strip sections circumferentially distributed with a circumferential pitch corresponding to a multiple of a width of the strip sections;

applying the annular reinforcing structures against end flaps of the strip sections of the first series; and

laying down on the toroidal support at least one second series of the strip sections, each extending in a U-shaped conformation around the cross-section outline of the toroidal support between two consecutive strip sections of the first series to define the at least one carcass ply, each of the strip sections of the second series having end flaps overlapping respective annular reinforcing structures at an axially opposite position relative to end flaps of the strip sections of the first series.

33. (new) The method of claim 32, wherein the crown portions of the strip sections of the first series and the strip sections of the second series are consecutively disposed in side-by-side relationship along a circumferential extension of the toroidal support.

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34. (new) The method of claim 33, wherein the side portions of each strip section of the first series are each partly covered with a side portion of at least one circumferentially consecutive strip section of the second series at a stretch included between a radially outer edge of respective annular reinforcing structures and a transition region between the side portions and the crown portion of the strip sections of the first series.

35. (new) The method of claim 34, wherein covering of the side portions of each strip section of the first series progressively decreases starting from a maximum value close to the radially outer edge of the respective annular reinforcing structures until reaching a zero value at the transition region between the side portions and the crown portion of the strip sections of the first series.

36. (new) The method of claim 31, wherein the side portions of the strip sections radially converge in a direction of a geometric rotation axis of the toroidal support.

37. (new) The method of claim 31, further comprising the step of defining regions of increased width close to inner circumferential edges of the carcass structure.

38. (new) The method of claim 37, wherein preparation of the strip sections takes place by cutting actions sequentially carried out on at least one continuous strip element incorporating the thread elements into the at least one layer of raw elastomer material, the step of defining

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regions of increased width being carried out on the at least one continuous strip element before execution of the cutting actions.

39. (new) The method of claim 31, wherein the at least one elongated element is laid down directly in contact with the at least one carcass ply.

40. (new) The method of claim 32, wherein the at least one elongated element is laid down directly against the end flaps of the strip sections of the first series to form the annular anchoring insert directly in contact with the strip sections of the first series.

41. (new) The method of claim 31, wherein the at least one filling body is located at a radially outer position relative to the annular anchoring insert.

42. (new) The method of claim 31, wherein after laying down the at least one elongated element to form the annular anchoring insert, a continuous strip of raw elastomer material is laid down directly against the annular anchoring insert, so that the step of forming of the at least one filling body is carried out concurrently with the step of joining the at least one filling body to the annular anchoring insert.

43. (new) A carcass structure for tyres, in particular for two-wheeled vehicles, comprising:

at least one carcass ply comprising strip sections circumferentially distributed around a geometric rotation axis of the tyre, each strip section comprising at least two thread elements

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disposed longitudinally and in parallel to each other and at least partly coated with at least one layer of raw elastomer material, each of the strip sections extending in a substantially U-shaped conformation around a cross-section outline of the carcass structure, to define two side portions spaced apart from each other in an axial direction and a crown portion extending at a radially outer position between the side portions; and

a pair of annular reinforcing structures each engaged at areas close to a respective inner circumferential edge of the at least one carcass ply and comprising:

an annular anchoring insert substantially in a form of a crown disposed coaxially with the carcass structure and adjacent to the respective inner circumferential edge of the at least one carcass ply, the annular anchoring insert being formed of at least one elongated element extending in concentric coils; and

a filling body of raw elastomer material joined to the annular anchoring insert.

44. (new) The carcass structure of claim 43, wherein the at least one carcass ply comprises:

a first series of strip sections and a second series of strip sections disposed in a mutually alternating sequence along a circumferential extension of the carcass structure,

each annular reinforcing structure having an axially inner side turned towards end flaps of the strip sections of the first series and an axially outer side turned towards end flaps of the strip sections of the second series.

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45. (new) The carcass structure of claim 44, wherein the crown portions of the strip sections of the first series and the strip sections of the second series are disposed in mutual side-by-side relationship along the circumferential extension of the carcass structure.

46. (new) The carcass structure of claim 45, wherein the side portions of each strip section of the first series are each partly covered with a side portion of at least one adjacent strip section of the second series at a stretch included between a radially outer edge of respective annular reinforcing structures and a transition region between the side portions and the crown portion of the strip sections of the first series.

47. (new) The carcass structure of claim 46, wherein covering of the side portions of each strip section of the first series progressively decreases starting from a maximum value close to the radially outer edge of the respective annular reinforcing structures until reaching a zero value at the transition region between the side portions and the crown portion of the strip sections of the first series.

48. (new) The carcass structure of claim 43, wherein the side portions of the strip sections radially converge in a direction of a geometric rotation axis of the carcass structure.

49. (new) The carcass structure of claim 44, wherein the strip sections of the first series are disposed according to a circumferential distribution pitch corresponding to a multiple of a width of the strip sections of the first series or the strip sections of the second series are disposed

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according to a circumferential distribution pitch corresponding to a multiple of a width of the strip sections of the second series.

50. (new) The carcass structure of claim 43, wherein each strip section has regions of increased width at areas close to inner circumferential edges of the carcass structure.

51. (new) The carcass structure of claim 50, wherein the thread elements included in each strip section are mutually spaced apart at the regions of increased width.

52. (new) The carcass structure of claim 43, wherein each of the strip sections has a width included between 3 mm and 15 mm.

53. (new) The carcass structure of claim 43, wherein each of the strip sections comprises three to eight thread elements.

54. (new) The carcass structure of claim 43, wherein the thread elements are disposed in the strip sections according to a mutual distance between centres not lower than 1.5 times a diameter of the thread elements.

55. (new) The carcass structure of claim 43, wherein the annular anchoring inserts have a single series of radially-superposed concentric coils.

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